

Application No.: 09/848,255

Docket No.: 21919-00013-US

REMARKS

Claims 1-8 remain pending in this application. Claims 1 and 6 are independent. No claims have been amended, added, or canceled by this Response.

Anticipation Rejection over Clemes is Deficient

Withdrawal of the rejection of claims 6-8 under 35 U.S.C. §102(b) as being anticipated by Clemes (US 5,106,596) is requested. Applicant submits that the applied art does not disclose all the claimed limitations.

Applicant notes that anticipation requires the disclosure, in a prior art reference, of each and every limitation as set forth in the claims.¹ There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. §102.² To properly anticipate a claim, the reference must teach every element of the claim.³ "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference".⁴ "The identical invention must be shown in as complete detail as is contained in the ...claim."⁵ In determining anticipation, no claim limitation may be ignored.⁶

Clemes fails to meet the statutory requirements for anticipation, at least for independent claim 6, as discussed below.

In particular, the applied art does not disclose a two-stage sulphur dioxide generator, which includes, among other features, "...a first composite sheet; *a second composite sheet*; a plurality of pockets *formed between the first and second composite sheets*", as recited in independent claim 6.

¹ *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985).

² *Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991).

³ See MPEP § 2131.

⁴ *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

⁵ *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

⁶ *Pac-Tex, Inc. v. Amerace Corp.*, 14 USPQ2d 187 (Fed. Cir. 1990).

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In the portion of the Clemes reference cited by the Examiner, Clemes discloses a paper substrate coated with a binder, i.e., a paper substrate coated with a layer comprising a binder in which sodium metabisulphate is dispersed (see col. 1, lines 17-20). Applicant submits that this disclosure fairly reads on the recitation of a "first composite sheet".

However, Clemes is silent on a second *composite* sheet, and is also silent on a plurality of pockets formed between first and second composite sheets, *because there is no disclosure of a second composite sheet in Clemes*. Clemes merely shows a second, single, *non-composite* sheet, in addition to the first composite sheet as interpreted above, i.e., paper substrate coated with a binder layer, as discussed.

Therefore, since the applied art does not disclose each claimed limitation of at least independent claim 6, the anticipation rejection is deficient, and should be withdrawn.

Reconsideration and allowance of claims 6-8 are requested.

Unpatentability Rejection over Clemes in View of Razeto is Deficient

Withdrawal of the rejection of claims 1-5 as being unpatentable over Clemes (US 5,106,596) in view of Razeto et al. (US 4,478,904) is requested. Not only does the suggested combination fail to teach or suggest all the claimed limitations, Applicant submits that the Examiner has failed to establish proper motivation to combine the references in the manner suggested, especially in light of the fact that Razeto et al. teaches away from at least one aspect of the invention claimed in claims 1-5, as discussed further below.

At the outset, Applicant notes that, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, *the prior art reference must teach or suggest all the claim limitations.*⁷ Further, *the teaching or suggestion to make the claimed combination and the*

⁷ See MPEP §2143.

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*reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.*⁸

The applied art fails in at least two respects to establish a *prima facie* case of unpatentability, as discussed below.

References do not Teach or Suggest All Claimed Limitations

The Examiner admits that Clemes is deficient with respect to explicitly teaching or suggesting that first and second sheets include a coating of weldable synthetic plastics material on the surface facing the pockets, and offers Razeto et al. as purportedly teaching this limitation.

Applicant disagrees. Razeto et al. does not make up for the deficiencies of Clemes; particularly as these deficiencies relate to the failure of Clemes to teach or suggest ***both a first composite sheet and a second composite sheet.***

In the portion of the Clemes reference cited by the Examiner, Clemes discloses a paper substrate coated with a binder, i.e., a paper substrate coated with a layer comprising a binder in which sodium metabisulphate is dispersed (see col. 1, lines 17-20). Applicant submits that this disclosure fairly reads on the recitation of a "second composite sheet".

However, Clemes is silent on a first ***composite*** sheet comprising a paper substrate, as claimed in independent claim 1, and is also silent on a plurality of pockets formed between first and second composite sheets, ***because under the Examiner's interpretation and explanation of the rejection, there is no disclosure of a first composite sheet in Clemes.*** Clemes merely shows a first, single, ***non-composite*** sheet, in addition to the second composite sheet as interpreted above, i.e., paper substrate coated with a binder layer, as discussed.

In addition, Clemes is silent on any bonding of the first and second sheets to form a series of closed pockets between the first and second sheets. Clemes merely alludes to, in discussion of

⁸ *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) and *See* MPEP §2143.

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background art, that the generator is formed with closed pockets, without any specificity as to the arrangement and constitution of the closed pockets.

As indicated above, Razeto et al. is relied upon to provide a teaching or suggestion of a weldable synthetic plastic coating on a face of the first composite sheet, and is lacking with respect to making up for the deficiencies of Clemes, discussed above.

Therefore, since the applied art, either alone or in combination, does not teach or suggest each claimed limitation of at least independent claim 1, the unpatentability rejection is deficient, and should be withdrawn. Reconsideration and allowance of claims 1-5 are requested.

References are Not Properly Combinable – Razeto et al. Teaches Away

An essential evidentiary component of an obviousness rejection is a teaching or suggestion or motivation to combine the prior art references.⁹ Combining prior art references without evidence of a suggestion, teaching or motivation simply takes the inventors' disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight.¹⁰

“There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.”¹¹ Further with regard to the level of skill of practitioners in the art, there is nothing in the statutes or the case law which makes “that which is within the capabilities of one skilled in the art” synonymous with obviousness.¹² The level of skill in the art cannot be relied upon to provide the suggestion to combine references.¹³

Further evidence that there is insufficient motivation to combine Clemes (Applicant's own work) and Razeto et al., is that the secondary reference to Razeto et al. itself teaches away from the combination suggested by the Examiner. References teach away from a combination

⁹ *C.R. Bard, Inc. v. M3 Systems, Inc.*, 48 USPQ2d 1225 (Fed. Cir. 1998)

¹⁰ *Interconnect Planning Corp. v. Feil*, 227 USPQ 543 (Fed. Cir. 1985)

¹¹ See MPEP §2143.01, citing *In re Rouffet*, 149 F.3d. 1350, 1357, 47 USPQ2d 1453, 1457-8 (Fed. Cir. 1998).

¹² *Ex parte Gerlach and Woerner*, 212 USPQ 471 (PTO Bd. App. 1980).

¹³ See MPEP §2143.01, citing *Al-Site Corp. v. VSI Int'l Inc.*, 50 USPQ2d 1161 (Fed. Cir. 1999).

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when the combination would produce a seemingly inoperative device.¹⁴ If the teachings of a prior-art reference would lead one skilled in the art to make a modification that would render another prior-art device inoperable (or unsuitable for a stated purpose), such a modification would generally not be obvious.¹⁵

Further, it is impermissible within the framework of 35 U.S.C. §103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art.¹⁶ Further in this regard, As the Court of Customs and Patent Appeals, predecessor to the Federal Circuit, has held:

All relevant teachings of cited references must be considered in determining what they fairly teach to one having ordinary skill in the art. The relevant portions of a reference include not only those teachings which would suggest particular aspects of an invention to one having ordinary skill in the art, but also those teachings which would lead such a person away from the claimed invention.¹⁷

The rejections in the Official Action amount, in substance, to nothing more than hindsight reconstruction of Applicant's invention by relying on isolated teachings of the applied art, without considering the overall context within which those teachings are presented. Without benefit of Applicants' disclosure, a person having ordinary skill in the art would not know what portions of [Clemes and Razeto et al.] to consider, and what portions to disregard as irrelevant or misleading.¹⁸

Applicant's claimed invention is directed to a *sulphur dioxide generator* which might find application in, for example, the shipment of grapes or other fruits or vegetables subject to spoilage by fungi.

¹⁴ *In re Spinnoble*, 160 USPQ 237, 244 (CCPA 1969).

¹⁵ *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

¹⁶ *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 230 USPQ 416 (Fed. Cir. 1986).

¹⁷ *In re Mercier*, 185 USPQ 774, 778 (CCPA 1975).

¹⁸ *In re Wesslau*, 147 USPQ 391, 393 (CCPA 1965).

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Razeto et al., is directed to a *chlorine generator* which also purports to overcome spoilage problems with fruits and vegetables in transit.

However, Razeto et al. specifically disfavors the use of sulphur dioxide generators for fruit and vegetable shipment, as stated at col. 1, lines 10-14. The disclosure of Razeto et al. is set forth as solving a known problem with sulphur dioxide generators, and specifically chooses chlorine dioxide, and *not* sulphur dioxide, as in Applicant's claimed invention.

Applicant submits that this portion of the disclosure of Razeto et al. may not fairly be ignored by the Examiner in formulating a rejection for unpatentability, particularly in setting forth the required motivation to modify the disclosure of Applicant's own work, i.e., the primary reference to Clemes by the teaching of Razeto et al.

This is submitted as being true under both the MPEP and the Federal Circuit case law on point, *even if Razeto et al. is only relied upon for a limited teaching of a coating of weldable synthetic plastics material formed on a face of the first composite sheet, or to teach thermal sealing while maintaining moisture permeability*, as stated by the Examiner in the Official Action.

The Federal Circuit case law cited above is clear in this regard – there is no motivation found in the applied art to modify Clemes by the teachings of Razeto et al. in the manner suggested, particularly since Razeto et al. teaches away from Applicant's claimed invention.

Therefore, Applicant submits that a person having skill in the art would not be motivated to modify Clemes by the teaching of Razeto et al. to generate sulphur dioxide, given the technical problem solved by Razeto et al., particularly in light of the specific teaching away by Razeto et al. of the use of sulphur dioxide.

Accordingly, withdrawal of the rejection and allowance of independent claim 1 is requested. Further, consideration and allowance of dependent claims 2-5, depending from allowable claim 1, are also requested.

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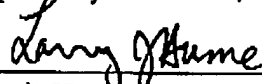
In view of the above, each of the presently pending claims 1-8 in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

To aid in the Examiner's review, a "clean" listing of all pending claims in the application is attached at the end of this Response.

Applicant believes no fee is due with this Response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 21919-00013-US from which the undersigned is authorized to draw.

Respectfully submitted,

By


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"CLEAN" VERSION OF CURRENTLY PENDING CLAIMS

This listing of claims represents all previously entered claim amendments and new claims in this application:

1. (Previously presented) A sulphur dioxide generator, comprising:

a first composite sheet comprising a paper substrate with a coating of weldable synthetic plastics material on one face thereof,

a second composite sheet comprising a paper substrate with a first coating of a substance which, in the presence of moisture, generates sulphur dioxide, and a second coating of a weldable synthetic plastics material thereon,

the first coating being between the paper substrate and the second coating,

the weldable coatings being secured to one another in such manner as to provide a series of closed pockets between the composite sheets,

each pocket having a powdered substance contained therein which, in the presence of moisture, generates sulphur dioxide.

2. (Previously presented) The sulphur dioxide generator of claim 1, wherein the first coating comprises sodium metabisulphate.

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3. (Previously presented) The sulphur dioxide generator of claim 1, wherein the first coating comprises an acidic mixture containing sodium sulphite and fumaric acid.
4. (Previously presented) The sulphur dioxide generator of claim 1, wherein the first coating comprises an acidic mixture containing sodium sulphite and potassium bitartrate.
5. (Previously presented) The sulphur dioxide generator of claim 4, wherein the first coating further comprises an acidic mixture containing fumaric acid.
6. (Previously presented) A two-stage sulphur dioxide generator, comprising:
- a first composite sheet;
 - a second composite sheet;
 - a plurality of pockets formed between the first and second composite sheets;
 - a first stage sulphur dioxide generator arranged to be operable in at least one of the first and second composite sheets when water vapor is present, and
 - a second stage sulphur dioxide generator arranged to be operable in each of the plurality of pockets.
7. (Previously presented) The two-stage sulphur dioxide generator of claim 6, wherein the first stage sulphur dioxide generator comprises a material selected from the group

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consisting of sodium metabisulphate, an acidic mixture containing sodium sulphite and fumaric acid, and an acidic mixture containing sodium sulphite and potassium bitartrate.

8. (Previously presented) The two-stage sulphur dioxide generator of claim 6, wherein the second stage sulphur dioxide generator material is a powdered material activated by water vapor permeating through one or more of the first and second composite sheets.